

MATHEMATICS MAJOR (BA or BS PROGRAM) WITH PRE-ENGINEERING CONCENTRATION



2016-2017 Catalog
Declaration of Major

EDGEWOOD COLLEGE

Name: _____ ID: _____

Major Advisor Approval: _____ Date: _____

Department Chair Approval: _____ Date: _____

Intended Graduation Month: January August May Intended Graduation Year: _____

THIS FORM IS TO ADD/DECLARE A MAJOR. IF YOU WISH TO DROP/REMOVE A PREVIOUSLY DECLARED MAJOR, YOU MUST SUBMIT A SEPARATE MAJOR DECLARATION DROP FORM. THIS FORM IS AVAILABLE AT REGISTRAR.EDGEWOOD.EDU

The Mathematics Major with pre-Engineering has been designed in collaboration with the Colleges of Engineering at UW-Madison. Students who fully complete the Edgewood College pre-engineering concentration and the Bachelor's degree in Engineering from UW-Madison will also receive a BS or BA degree in Mathematics from Edgewood College, subject to the completion of the degree requirements stipulated by the College.

Forty-four (44) credits in mathematics, including:

Major Requirements:

Transfer credit applied (including AP/CLEP/etc):

Required Courses:

Course / Institution

| | | | |
|----------|-----|----------------------------|--|
| MATH 231 | M | Calculus I* | |
| MATH 232 | M | Calculus II* | |
| MATH 233 | M | Calculus III* | |
| MATH 301 | U | Problem Solving and Proof* | |
| MATH 341 | | Linear Algebra* | |
| MATH 351 | | Probability* | |
| MATH 485 | 3KX | Mathematics Seminar* | |

Students are required to complete at least five additional mathematics courses from the following list, chosen with the consent of the student's academic advisor, to include at least one from each of the three pairings. Majors planning to go to graduate school should take both courses in all three pairings:

| | | |
|----------|-------------------------|--|
| MATH 331 | Differential Equations* | |
|----------|-------------------------|--|

Analysis Pairing:

| | | |
|----------|-------------------|--|
| MATH 431 | Real Analysis* | |
| MATH 432 | Complex Analysis* | |

Algebra Pairing:

| | | |
|----------|----------------------|--|
| MATH 441 | Abstract Algebra I* | |
| MATH 442 | Abstract Algebra II* | |

Geometry Pairing:

| | | | |
|----------|--|-------------------|--|
| MATH 461 | | College Geometry* | |
| MATH 462 | | Topology* | |

Additional required courses for the Pre-Engineering Concentration:

| | | | |
|----------|----|-----------------------|--|
| CHEM 120 | S | General Chemistry I* | |
| CHEM 121 | S | General Chemistry II* | |
| PHYS 201 | SU | College Physics I* | |
| PHYS 202 | S | College Physics II* | |
| PHYS 350 | I | Scientific Computing* | |

**course has prerequisites*

Policies

Students who complete the Edgewood College pre-engineering concentration with a minimum GPA of 3.0; have a 3.0 in mathematics, chemistry and physics courses; have the General Education courses equivalent to the liberal arts electives required by the UW-Madison and have a positive recommendation from the Edgewood College physical sciences or mathematics faculty are well-positioned to apply for admission into the Colleges of Engineering at UW-Madison. Course credits earned by the students upon completion of their engineering program at UW-Madison may be transferred to Edgewood College to complete the BA or BS in Mathematics with a Pre-Engineering Concentration from Edgewood College.

All mathematics prerequisites for mathematics courses must be completed with a grade of 'C' or above to satisfy the prerequisite requirement.

Courses in mathematics may not be audited. Courses may only be taken Pass/Fail with the consent of both the instructor and the Mathematics Department Chair.

In order for any mathematics course to count towards any of the mathematics majors or minors, the course must have been completed with five years preceding the date of major/minor declaration. Courses taken prior to that point will be evaluated on an individual basis by the department.

Any mathematics course requirement for any major or minor offered in the department, with the exceptions of MATH 485, MATH 459 and MATH 451, may be satisfied through the proficiency process established by the department. The minimum residency requirement may not be waived.

A student must have a cumulative grade point average of 2.5 or above in courses required for the major or minor.

A student pursuing any major within the Mathematics Department must take at least three mathematics courses at or above the 300 level at Edgewood College.

Students intending to major or minor in mathematics or mathematics teaching should take MATH 301 concurrently or as